Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-39. (Cancelled)

40. (Currently amended) A method for determining if an individual has ~~a predisposition~~ an increased risk of ~~to~~ developing thrombosis due to inherited APC-resistance caused by a gene mutation, said method comprising the step of:

detecting in a cell sample from the individual the occurrence of a Factor V gene mutation;

wherein the mutation gives rise to the expression of a mutated Factor V/Va molecule.~~, which expression is associated with the expression of APC-resistance and a predisposition to develop thrombosis.~~

41. (Previously presented) The method of claim 40, wherein the mutation is detected as an abnormal absence or presence of at least one nucleic acid fragment or abnormal sequence in the Factor V gene, wherein the mutation is detected using nucleic acid hybridization.

42. (Previously presented) The method of claim 40, wherein the mutation is determined indirectly based on linkage thereof to a neutral polymorphism in the Factor V gene.

43. (Cancelled)

44. (Previously presented) The method of claim 40, wherein the Factor V gene mutation is detected as an abnormal absence or presence of a nucleic acid fragment or abnormal sequence caused by the mutation, wherein the Factor V gene mutation is detected using nucleic acid sequencing.

45. (Previously presented) The method of claim 40, wherein the Factor V gene mutation is detected as an abnormal absence or presence of a nucleic acid fragment or abnormal sequence caused by the mutation, wherein the Factor V gene mutation is detected using an immunoassay.

46. (Currently amended) A method for ~~detecting~~ determining an increased risk of ~~a predisposition to~~ developing thrombosis in an individual, said method comprising ~~determining the presence in the individual's Factor V gene sequence of at least one mutation and~~ comparing the individual's Factor V gene sequence to a normal Factor V gene sequence.

47. (Currently amended) A method for ~~detecting a predisposition to~~determining an increased risk of developing thrombosis in an individual, said method comprising the steps of:

obtaining a cell sample from the individual; and

determining the presence of at least one Factor V gene mutation in the individual, wherein the presence of the Factor V gene mutation is indicative of an increased risk of thrombosis.

48. (Currently amended) A method for ~~detecting~~ determining an increased risk of APC-resistance in an individual comprising the steps of:

obtaining a ~~DNA~~ nucleic acid sample from the individual; and

determining the presence of at least one Factor V gene mutation in the individual, wherein the presence of the Factor V gene mutation is indicative of an increased risk of APC-resistance ~~thrombosis~~.

49. (Currently amended) The method of claim ~~46,~~ 47 or 48, wherein the Factor V gene mutation is determined based on linkage thereof to a neutral polymorphism.

50. (Currently amended) The method of claim ~~46,~~ 47 or 48, wherein said determining step comprises sequencing the Factor V gene.

51. (Currently amended) The method of claim ~~46,~~ 47 or 48, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a normal Factor V gene.

52. (Currently amended) The method of claim ~~46,~~ 47 or 48, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a Factor V gene that comprises at least one mutation associated with APC-resistance.

53. (New) The method of claim 46 comprising sequencing the Factor V gene.

54. (New) A method for identifying an occurrence of a Factor V gene mutation associated with APC-resistance in an individual, the method comprising determining an occurrence of the mutation in the Factor V gene locus, wherein the mutation gives rise to expression of a mutated Factor V molecule associated with APC-resistance.

55. (New) The method of claim 54, wherein the mutation is determined as an abnormal absence or presence of at least one nucleic acid fragment, abnormal nucleic acid sequence, or combinations thereof, in the Factor V gene.

56. (New) The method of claim 54, wherein the mutation is determined based on linkage thereof to a neutral polymorphism in the Factor V gene.

57. (New) The method of claim 54, wherein said determining step comprises sequencing the Factor V gene.

58. (New) The method of claim 54, wherein said determining step comprises comparing a nucleic acid sequence of the Factor V gene from the individual to a normal Factor V gene.

59. (New) The method of claim 54, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a normal Factor V gene.

60. (New) The method of claim 54, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a Factor V gene that comprises at least one mutation associated with APC-resistance.

61. (New) The method of claim 55, wherein the mutation comprises an abnormal nucleic acid sequence in the Factor V gene.